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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,538	06/25/2003	Richard Alan Dayan	RPS920030022US1	4060

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EXAMINER	
TRUJILLO, JAMES K	

ART UNIT	PAPER NUMBER
2116	

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/603,538	DAYAN ET AL.	
	Examiner	Art Unit	
	James K. Trujillo	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 June 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *062503*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The office acknowledges the receipt of the following and placed of record in the file: Change of Address dated 12/17/2004.

2. Claims 1-22 are presented for examination.

Drawings

3. The drawings are objected to because they contain unreadable labels in at least figure 2A. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the chassis, power supplies and

cooling fans must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not appear to mention the use of cooling fans.

Claim Objections

6. Claims 2 and 6 are objected to because of the following informalities:

a. Regarding claim 2, on line 1 of the claim "unique" should be removed to prevent lack of antecedent basis.

b. Regarding claim 6, on line 1 of the claim "set of nodes" should be replaced with "multi-node data processing system" to prevent lack of antecedent basis.

Suggestions by the applicant on these informalities are welcome.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-5, 7 and 16-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheston et al., U.S. Patent 6,405,259.

9. Regarding claim 1, Cheston teaches a remote power management method for use in a multi-node data processing system, comprising:

a. configuring the system to include at least one multi-node partition (establish logical workgroups, 502, figure 5);

b. determining an identifier associated with each network interface card (NIC) in the partition (group identifier 416, col. 6, lines 40-46); and

c. based at least in part on the determined NIC identifiers, modifying wake-on LAN (WOL) filters of each NIC in the partition to include at least one WOL filter common to all of the NIC's in the partition, wherein a WOL packet corresponding to the at least one common WOL filter produces a reset on the corresponding node such that each partition node is reset in response to the WOL packet (filters may be programmed to pass only selected network packets such a packets for the selected workgroup, col. 3, lines 26-33; each client in a workgroup is able to response to a wakeup signal, col. 4, lines 58-65 and col. 6, lines 12-24).

10. Regarding claim 2, Cheston taught the method according to claim 1, as described above. Cheston further teaches wherein determining the identifier comprises determining the media access control (MAC) address of each NIC in the partition (MAC header specifies all MACs on the network, col. 6, lines 36-40).

11. Regarding claim 3, Cheston taught the method according to claim 2, as described above. Cheston further teaches wherein modifying the WOL filters comprises including in each NIC a WOL filter corresponding to each of the determined MAC addresses such that a WOL packet addressed to any NIC in the partition is accepted by each NIC in the partition (the filters are programmed to receive a group identifier, col. 6, lines 12-24 and col. 6, lines 47-54).

12. Regarding claim 4, Cheston taught the method according to claim 1, as described above. Cheston further teaches wherein determining an identifier includes creating a universal MAC address common to all NIC's in the partition (global MAC address together with the group identifier, col. 6, lines 47-59).

13. Regarding claim 5, Cheston taught the method according to claim 4, as described above. Cheston further teaches wherein modifying the WOL filters comprises including a WOL filter corresponding to the universal MAC address on each NIC of the partition (col. 6, lines 12-24).

14. Regarding claim 7, Cheston taught the method according to claim 1, as described above. Cheston further teaches wherein configuring the nodes is further characterized as configuring the nodes to include a boot node (network manager, col. 2, lines 53-62; also, station generating a wake-up frame, col. 6, lines 67 through col. 7, line 8) and a set of subordinate nodes (workstations operating in a low power mode, col. 2, lines 53-62; also, stations that receive the wake-up frame, col. 7, lines 9-14), wherein the boot node, when reset, is configured to boot all of the nodes into the partition configuration (restoring full power to work stations in low power mode; also,returning to full-power only the station of the second address, col. 7, lines 10-14).

15. Regarding claims 16-20 and 22, Cheston taught the claimed method therefore he also teaches the claimed computer program product.

16. Regarding claim 21, Cheston taught the method according to claim 16, as described above. Cheston further teaches wherein the code means for modifying the WOL filters comprises code means for including a WOL filter corresponding to the universal MAC address ("global address") on each NIC of the partition, wherein the universal MAC address is distinct from the MAC address of each of the NIC's (the global address may be implemented using a default MAC address, a MAC address used for broadcast, or any predefined unique bit pattern, col. 6, lines 12-24 and col. 6, lines 55-59).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. Claims 6 and 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheston in view of Applicant's Admitted Prior Art (AAPA).

19. Regarding claim 6, Cheston taught the method according to claim 1, as described above. Cheston does not explicitly disclose wherein configuring the multi-node data processing system is further characterized as configuring a plurality of symmetric multiprocessing devices, each having a set of processors and a system memory shared among the processors, as a partition.

AAPA teaches configuring is further characterized as configuring a plurality of symmetric multiprocessing devices, each having a set of processors and a system memory shared among the processors, as a partition (pages 1 and 2 of the specification). AAPA further teaches providing the advantage of the ability to scale and logically partition individual server systems enables customers to manage their information technology investment by paying only for the processing capabilities currently needed.

It would have been obvious to one of ordinary skill in the art, having the teachings of Cheston and AAPA before them at the time the invention was made, to modify the configuring of the multi-node data processing as taught by Cheston to include configuring a plurality of symmetric multiprocessing devices as taught by AAPA.

One of ordinary skill in the art would have been motivated to make this modification in order to achieve the advantage of the ability to scale and logically partition individual server

systems enables customers to manage their information technology investment by paying only for the processing capabilities currently needed, in view of AAPA. In summary, Cheston alone does not teach wherein the configuring is for an environment with symmetric multiprocessing devices. However, AAPA teaches configuring a data processing system with symmetric multiprocessing devices with a desired advantage.

20. Regarding claim 8, Cheston teaches a data processing system, comprising:

a. a plurality of nodes (wherein the nodes are clients 104, figure 5)

b. means for configuring the plurality of nodes as at least one logical partition wherein each node is associated with one of the partitions (establish logical workgroups, 502, figure 5); and

c. a plurality of network interface cards (NIC's) with at least one NIC corresponding to each of the plurality of nodes, wherein each NIC includes at least one wake-on-LAN filter that is common to all of the NIC's in the partition wherein a WOL packet corresponding to the common WOL filter is accepted by each NIC in the partition there resetting each node in the partition (wherein the NICs of Cheston are network adapter cards 230 within each client, figure 2; wherein theWOL filters are filters 233 of Cheston , figure 3; each client in a workgroup is able to response to a wakeup signal, col. 4, lines 58-65 and col. 6, lines 12-24).

Cheston does not explicitly disclose wherein each node comprises a symmetric multiprocessor system.

AAPA teaches wherein a node comprises a symmetric multiprocessor system (pages 1 and 2 of the specification). AAPA further teaches providing the advantage of the ability to scale and logically partition individual server systems enables customers to manage their information technology investment by paying only for the processing capabilities currently needed.

It would have been obvious to one of ordinary skill in the art, having the teachings of Cheston and AAPA before them at the time the invention was made, to modify the plurality of nodes of Cheston to include configuring a plurality of symmetric multiprocessing devices as taught by AAPA.

One of ordinary skill in the art would have been motivated to make this modification in order to achieve the advantage of the ability to scale and logically partition individual server systems enables customers to manage their information technology investment by paying only for the processing capabilities currently needed, in view of AAPA. In summary, Cheston alone does not teach wherein the configuring is for an environment with symmetric multiprocessing devices. However, AAPA teaches configuring a data processing system with symmetric multiprocessing devices with a desired advantage.

21. Regarding claim 9, Cheston together with AAPA taught the system according to claim 8, as described above. Cheston further teaches wherein each NIC in the partition comprises a plurality of WOL filters including a WOL filter corresponding to each NIC in the partition (wherein the network adapter card 230 of Cheston is a NIC and filter 233 is a WOL filter and each network adapter card 230 of Cheston has a filter 233, figures 2 and 3).

22. Regarding claim 10, Cheston together with AAPA taught the system according to claim 9, as described above. Cheston further teaches wherein the plurality of WOL filters includes a

WOL filter corresponding to the media access control (MAC) address of each device in the set (col. 6, lines 12-24).

23. Regarding claim 11, Cheston together with AAPA taught the system according to claim 8, as described above. Cheston further teaches wherein the common WOL filter corresponds to a universal MAC address shared by each of the NIC's in the partition, wherein the universal MAC address is distinct from the MAC address of each of the NIC's (the global address may be implemented using a default MAC address, a MAC address used for broadcast, or any predefined unique bit pattern, col. 6, lines 12-24 and col. 6, lines 55-59).

24. Regarding claim 12, Cheston together with AAPA taught the system according to claim 8, as described above. Cheston and AAPA further individually teach wherein the WOL filter responds to a WOL packet comprising a recognized media access control (MAC) address repeated 16 times (Cheston teaches using Magic Packets, col. 6, lines 40-46, Magic packets inherently contain a MAC address repeated 16 times). AAPA further discloses that a magic packet is a packet in which a particular MAC address is repeated 16 times.

25. Regarding claim 13, Cheston together with AAPA taught the system according to claim 8, as described above. AAPA further teaches wherein each node is further characterized as having its own chassis, firmware, power supplies, and cooling fans (chassis pages 1 and 2 of the specfication). It is inherent that each node would have its own firmware, power supplies and cooling fans when contained in its own chassis. Cheston discloses nodes that are client computers. The client computers in Cheston are further remotely powered on and thus inherently contain a power supply along with firmware to power up. Even though Cheston does not disclose wherein each node has its own chassis and cooling fans it would have been obvious

to modify the nodes ("clients") of Cheston to include their own chassis and cooling fans. A chassis provides the advantage of providing a way to contain the node while the cooling fans would provide the advantage of reducing the operating temperature of the nodes.

26. Regarding claim 14, Cheston together with AAPA taught the system according to claim 8, as described above. AAPA further teaches the means for configuring the nodes as logical partitions including: a bi-directional scalability link connecting each of the nodes in the system; and means for sharing resources of each node in the partition under a single operating system image (pages 1 and 2 of the specification).

27. Regarding claim 15, Cheston together with AAPA taught the system according to claim 8, as described above. Cheston further teaches wherein the nodes within each partition are further characterized as including a boot node and a set of subordinate nodes; wherein the boot node, when reset, is configured to boot all of the nodes into the partition configuration as set forth hereinabove in the rejection of claim 7.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 5,802,305 to McKaughan et al., teaches using a magic packet to wake a computer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James K. Trujillo whose telephone number is (571) 272-3677. The examiner can normally be reached on M-F (8:00 am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James K. Trujillo
4/5/06

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